

REMARKS/ARGUMENTS

In the Office Action mailed April 4, 2006, claims 1-22 were rejected. Applicants have thoroughly reviewed the outstanding Office Action including the Examiner's remarks and the references cited therein. The following remarks are believed to be fully responsive to the Office Action. All the pending claims at issue are believed to be patentable over the cited references.

Claims 1, 2, 3, 5, 6, 13, 17, and 18 have been amended to more clearly state the subject matter claimed. No new matter has been introduced. Claims 14-18 have been amended to correct dependency. As such, claims 1-22 remain pending.

CLAIM REJECTIONS – 35 U.S.C. § 112

Claims 17-18 are rejected under 35 U.S.C. 112, second paragraph, as allegedly being indefinite. However, in an effort to advance prosecution, Applicants have amended claims 17 and 18. Applicants believe that the amendments to these claims overcome the examiner's rejections. In light of the amendments, withdrawal of the rejection of claims 17 and 19 under 35 U.S.C. § 112 is respectfully requested.

CLAIM REJECTIONS – 35 U.S.C. § 102(b)

The Examiner rejected claims 1, 4, 7, 8, 13-16 and 19-22 under 35 U.S.C. §102(a) as allegedly being anticipated over United States Patent No. 6,687,632 to Rittman (hereinafter referred to as "Rittman"). In light of the following remarks, Applicants respectfully submit that these claims are allowable.

Initially, Applicants note that it is axiomatic that to qualify as an anticipation under Section 102, the cited reference must "bear within its four corners adequate directions for the

practice of the patent invalidated.” (See, for example, Dewey & Almay Chemical Co. v. Mimex Co., Inc., 52 U.S.P.Q. 138 (2nd Cir. 1942)).

Claims 1, 13, and 19 are independent; claims 4, 7, and 8 depend ultimately from claim 1, claims 14-16 depend from claim 13, and claims 20-22 depend from claim 19. Rittman fails to teach each and every element of claims 1, 13, and 19.

The reference does not teach or suggest the combination recited by claim 1. For example, Applicants’ independent claim 1 recites, in relevant part, “a combining system electrically connected within said transmission system and configured to pass RF signals from said source site, ... wherein said combining system further comprises a forward directional coupler configured to tap RF signals progressing from said source site, and a reverse directional coupler configured to tap reflected RF signals, and wherein said combining system provides as separate electrical outputs RF signals from said source site and RF signals that have been reflected from loci within said transmission system; and a test signal source, wherein a test signal from said test signal source is embedded within an RF signal stream fed into said transmission system from said source site.”

The Office Action states, “Rittman discloses a system which tests the CATV systems transmission by generating/transmitting quasi-random data along transmission path (22) which is recovered and analyzed for ghosts/reflections using oscilloscope 24 and PC using MATLAB 40 (Fig 5). As shown in the figure the system passes RF signals with the generated random data where the signals are analyzed at a location near the transmitted end in order to eliminate any undesirable equalization by the receiver/set-top box. Regarding the time intervals, Rittman discloses the autocorrelation of the transmitted signal with the reflected signal (col. 5, line 5-15).”

The system of Rittman, both as described above and as described in the patent, does not include each and every element of claims 1 and 13. For example, Applicants' claim 1 recites in relevant part "a transmission system configured to carry RF signals from a source site to a destination site ... and a test signal ... embedded within an RF signal stream fed into said transmission system from said source site...." Applicants' claim 13 recites in relevant part "means for producing a test signal embedded within the stream of an RF signal...." Rittman, by contrast, recites "a system which tests ... by generating ... quasi-random data..." as quoted above, wherein the data source is a test signal generator necessarily disconnected in normal CATV system operation (Rittman FIG. 5). Because the test signal of Rittman is not a signal embedded within a signal stream, but instead is applied as a substitute signal during a test procedure, during which procedure normal operation of the system is disabled, both the apparatus and the function of Rittman differ from those of the Applicants' invention.

Regarding claims 1 and 13, as Rittman emphasizes, different signal patterns for testing yield different results. Rittman promotes the use of quasi-random strings of 64-QAM symbols in order to achieve relatively rapid results by virtue of the admittability of the complex I-Q space symbols to signal processing, and the known uniqueness of autocorrelation in this environment.

Indeed, Rittman further points out that "[e]quipment has long been in use to measure reflections. Such equipment includes, for example, TDRs ... and frequency sweep systems. Each of these methods of measuring reflections requires the injection of a known signal into the cable system and observation of the cable system for the effects of reflections. This method has the disadvantages that it requires a reference signal generation instrument, and either interfering with whatever signals are already on the system or requiring unused frequency spectrum in the system" (col. 3, l. 65 – col. 4, l. 7). The Applicants' invention employs just such a frequency

sweep system, albeit one not previously available, with the reference signal generator embedded in the broadcast source and with couplers used to extract signal samples for test.

Thus Rittman, in identifying the use of a reference signal generation instrument and a frequency sweep system as undesirable, teaches away from the Applicants' invention.

Thus, nowhere does Rittman teach or suggest the combination of claims 1 and 13. It therefore cannot anticipate claim 1 or 13 or any of their dependents, and the rejection of claims 1 and 13 and their dependent claims over Rittman is improper. Applicant therefore respectfully submits that a § 102 rejection is not proper.

Regarding claim 19, Applicants respectfully submit that Rittman fails to recite "transmitting an RF signal that includes an integral RF test signal into an RF transmission system...." and thus does not teach or suggest the combination of claim 19.

Therefore, the rejection of claims 1, 13, and 19 over Rittman, is improper for at least the reasons stated above. Each of claims 4, 7, 8, 14-16, and 20-22 depends from one of claims 1, 13, and 19. Therefore, for at least the reasons above, claims 4, 7, 8, 14-16, and 20-22 are also allowable.

In light of the foregoing arguments, withdrawal of the rejection of claims 1, 4, 7, 8, 13-16 and 19-22 under 35 U.S.C. § 102(b) as being anticipated by Rittman is respectfully requested.

CLAIM REJECTIONS – 35 U.S.C. § 103(a)

Claims 2, 3, 5, 6, and 9 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Rittman in view of AAPA (Applicants Admitted Prior Art).

Claims 10-12, 17, and 18 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Rittman.

Each of claims 2, 3, 5, 6, 9-12, 17, and 18 depends from one of claims 1 and 13.

Therefore, for at least the reasons above, claims 2, 3, 5, 6, 9-12, 17, and 18 are also allowable.

Regarding claims 11 and 12, Applicants respectfully traverse the OFFICIAL NOTICE regarding the analysis of the physical condition of television apparatus as cited in the Office Action.

Applicants respectfully request, should the Examiner maintain the rejection, that a reference disclosing this feature be cited.

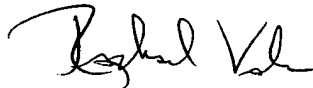
CONCLUSION

In view of the foregoing remarks, Applicants respectfully request all the rejections of the claims be removed. If, for any reason, the Examiner disagrees, please call the undersigned attorney at 202-861-1706 in an effort to resolve any matter still outstanding before issuing another action. The undersigned attorney is confident that any issue which might remain can readily be worked out by telephone.

In the event this paper is not timely filed, Applicants petition for an appropriate extension of time. Please charge any fee deficiencies or credit any overpayments to Deposit Account No. 50-2036 with reference to Attorney Docket No. 87326.3920.

Respectfully submitted,

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